

(c) Remarks

The claims are 1-12 and 14 with claims 1-4 being independent. Claims 1-4 were amended pursuant to page 28, line 16 to recite a beltlike substrate (406). In addition, Example 1 supports forming the film of the same conductivity at a different position from the first step. See page 33. Reconsideration of the claims is expressly requested.

Claims 1-12 and 14 were rejected as obvious over Moslehi '609 in view of Chan '811. The grounds of rejection are respectfully traversed.

Prior to addressing the grounds of rejection, Applicant wishes to briefly review certain key features and advantages of the present claimed invention. In order to meet the problem of fluctuating temperatures during deposition and others, a plurality of discharge means are disposed in the reactor in order to provide better control of film formation temperature. When the substrate is conveyed through the reactor during film formation voltages applied to plural electrodes are controlled or changed in order to form a deposited film of semiconductive layers having the same conductivity type. The deposited film formed at the second stage is a different position on the beltlike substrate from the corresponding film formed at the first stage. As noted in the Examples, the deposited films provide members with enhanced photoelectric conversion efficiency.

Moslehi fails to teach transporting a substrate through the reactor during film formation. Instead, wafer 12 is fixed within the reactor during the film formation process. Further, Moslehi fails to teach employing a plurality of discharge means disposed in the reactor and alternately applying electric power to discharge means within the reactor. The plasma forming means in Moslehi are external to the reactor as shown by sources S1-

S4. In column 12, of Moslehi it is further disclosed that the semiconductor wafer 12 is clamped against the chuck surface during processing. Accordingly, Moslehi is directed to a batch process, not a continuous wafer forming process and is not subject to the same problem of temperature control. In Moslehi at stages T₁₁ and T₁₇, for example, the same type film is deposited on the same position on the wafer.

Further as noted in Col. 2, lines 40-50 and 60-65 and Col. 6, lines 3-20, Moslehi's process is directed to suppressing heat stress or slip dislocation in a wafer caused when temperature changes during processing. Moslehi solves that problem by cavity switching to provide low wafer temperatures to reduce wafer temperature cycling and reduce slip dislocations between layers and cavities in a layer caused by heat stress. In Moslehi discharge means in separate cavities external to the reactor are activated, sequentially, to reduce processing time in the reactor. This is said to avoid problems in temperature cycling and gas flow cycling. Therefore, the switching occurs in Moslehi according to the process steps desired and not in accordance with a rise or drop of film formation temperature relative to a preset level. The defects of Moslehi are not remedied by Chen. In Chen, Col. 4, lines 8-30, a continuous process is disclosed. However several plasma sources 40' are said to be aligned to sequentially treat wafer 90 with different plasmas (Col. 4, lines 18-21) to form different layers. (emphasis supplied). This fails to teach meeting the problem of fluctuating temperatures during continuous processing by employing plural electrodes to form the same film layer.

Accordingly, Applicant submits that none of the references, whether alone or combined disclose or suggest the present claimed invention nor render it unpatentable.

Accordingly, it is respectfully requested that the claims be allowed and the case be passed to issue.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

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